

MULTIPLE CONTRAST ECHO-PLANAR IMAGING  
FOR CONTRAST-ENHANCED IMAGING

Abstract of the Disclosure

5 A dose of a contrast agent (44) is administered  
to the patient (42). A magnetic resonance is excited by  
an RF pulse (200) in a region of interest of the patient  
(42). An echo-planar imaging (EPI) readout waveform is  
implemented a preselected duration after the excitation to  
generate  $T_2$  or  $T_2^*$  weighted data. During the preselected  
10 duration, another echo planar readout waveform is  
implemented to generate  $T_1$  or proton density weighted data.  
The data is reconstructed (56) to generate a  $T_2$  or  $T_2^*$   
weighted image and a  $T_1$  weighted image. The  $T_1$  and  $T_2$  or  
 $T_2^*$  weighted images are combined (62) to generate a  
15 contrast enhanced image.